Amendments to the Specification:

Please delete the current Abstract of the Disclosure and substitute the following:

An interstitial fluid (ISF) extraction device includes a penetration member configured for penetrating a target site of a user's skin layer and, subsequently, residing in the user's skin layer and extracting an ISF sample therefrom and at least three concentrically-arranged pressure rings, each adapted for applying pressure to the user's skin layer in the vicinity of the target site while the penetration member is residing in the user's skin layer. In addition, the ISF extraction device is configured such that (i) the pressure rings apply pressure in an oscillating manner with asymmetric deployment and retraction cycles and (ii) only one of the at least three concentrically-arranged pressure rings is deployed at a time, thereby mitigating an ISF glucose lag of the ISF sample extracted by the penetration member.

In addition, please amend the following paragraphs in the specification:

[0007] The sampling module of systems according to embodiments of the present invention can optionally includes a penetration member configured for penetrating a target site of a user's skin layer and, subsequently, residing in the user's skin layer and extracting an ISF sample therefrom. The sampling module also optionally includes at least one pressure ring adapted for applying pressure to the user's skin layer in the vicinity of the target site while the penetration member is residing in the user's skin layer. In addition, if desired, the sampling module can be configured such that the pressure ring(s) is capable of applying pressure to the user's skin layer in an oscillating manner whereby an ISF glucose lag of the ISF sample extracted by the penetration member is mitigated.

[0034] During use of system 10, pressure ring 28 is applied in the vicinity of the target site TS, prior to penetration of the target site by penetration member 22, in order to tension the user's skin layer. Such tension serves to stabilize the user's skin layer and prevent tenting thereof during penetration by the penetrating member. Alternatively, stabilization of the user's skin layer prior to penetration by the penetrating member can be achieved by a penetration depth control element (not shown) included in sampling module 18. Such a

penetration depth control element rests or "floats" on the surface of the user's skin layer, and acts as a limiter for controlling penetration depth (also referred to as insertion depth). Examples of penetration depth control elements and their use are described in U.S. patent application Serial No. 10/690,083, ~~___,___ [Attorney Docket No. LFS-5002]~~ which is hereby fully incorporated herein by reference. If desired, the penetration member can be launched coincidentally with application of the pressure ring(s) to the user's skin layer, thereby enabling a simplification of the launching mechanism.

[0054] During use of system 10, first electronic controller 404 controls the measurement cycle of the analysis module 20, as described above. Communication between local controller module 14 and disposable cartridge 12 takes place via electrical contacts 306 of analysis module 20 (see FIG. 3). Electrical contacts 306 can be contacted by contact pins 708 (see FIG. 7) of the local controller module 14. Electrical signals are sent by the local controller module 14 to analysis module 20 to, for example, selectively open relief valves 316. Electrical signals representing the glucose concentration of an ISF sample are then sent by the analysis module to the local controller module. First electronic controller 404 interprets these signals by using the local controller algorithm 408 and displays measurement data on a first data display 406 (which is readable by the user). In addition, measurement data (e.g., ISF glucose concentration data) can be stored in first data storage element ~~409~~ 410.

[0071] The general form of the predictive algorithm is a linear combination of all allowed terms and possible cross terms, with coefficients for the terms and cross terms determined through regression analysis of measured ISF values and blood glucose values at the time of the ISF sample acquisition. Further details regarding predictive algorithms suitable for use in systems according to the present invention are included in U.S. Patent Application No. 10/652,464, ~~_____ (Attorney Docket No. LFS-5007),~~ which is hereby incorporated by reference.

[0086] If desired, ISF extraction device 900 can contain a penetration depth control element (not shown) for limiting and controlling the depth of needle penetration during lancing. Examples of suitable penetration depth control elements and their use are described in U.S.

patent application Serial No. 10/690,083, ~~[Attorney Docket No. LFS-5002],~~ which is hereby fully incorporated herein by reference.

[0096] An inner-most pressure ring of extraction devices according to an alternative embodiment of the present invention can, if desired, be a flat ring (see FIG. ~~140~~ 14 for the purpose of keeping the needle in the user's skin layer while applying negligible pressure to keep blood flowing to the area. FIG. 14 shows a cross-sectional side view of a portion of an interstitial fluid (ISF) extraction device 970 according to an alternative exemplary embodiment of the present invention. ISF extraction device 970 includes a penetration member 972, a pressure ring 974, a flat pressure ring 975, a first biasing member 976 (i.e., a first spring) for biasing the pressure ring 974 and a second biasing member 978 (namely, a second spring) for biasing the flat pressure ring.